



21 Feb 2011

To: CHSTP Regional Managers, Regional Consultant Project Managers

Fr: Ken Jong, CHSTP Engineering Manager

Re: Notice to Designer (NTD) No. 003 – Preliminary Engineering (30% Design) Scope Revisions

Purpose

The purpose of this memorandum is to provide interim guidance to the Regional Consultants on the pending revisions to the Preliminary Engineering (30% Design) Scope Guidelines Technical Memorandum (TM 0.1.1, R1). Specifically, the revisions address the structures design approach and responsibilities for 30% Design. In addition, a revised Geotechnical Investigation planning requirements to support 30% Design memo is attached.

Implementation Guidelines

The more significant revisions to the 30% Design Scope Guidelines are highlighted below:

1. 30% Design structural design requirements and responsibilities for PMT and RC
2. 30% Design structural aesthetic considerations and requirements
3. Delineation of Environmental Site Assessments (ESAs) and sensitive environmental resources that have access restrictions
4. Clarifying text for developing 30% Design Cost Estimates. The 30% Design Cost Estimate Methodology will be expanded and transmitted in a separate TM.

The attached draft of the TM 0.1.1 Preliminary Engineering (30% Design) Scope Guidelines, R1 and draft revision of the NTD-001 Geotechnical Investigations, R1, are undergoing final review. These draft documents can be used for developing the FY 11/12 AWP.

Clarification of the structures design effort is included in the following table and expands on the approach for 30% structures design requirements identified in TM 0.1.1, R1. The intent of this revised approach is to consolidate efforts for standard structures to make more efficient use of resources, and to focus the RC effort for 30% Design on the non-standard or complex structures (defined in TM 2.10.4 Interim Seismic Design Criteria) that require additional effort to confirm feasibility, and compliance with seismic and track-structure interaction design requirements.

	<u>Program Management Team</u>	<u>Regional Consultant Team</u>
Ground Motions	PMT led centralized effort for ground motions development with priority on Central Valley Sections	RC Staff seconded to the PMT for several months to support development of ground motions. For AWP purposes, assume 1 person for 6 months per RC (to be confirmed with PMT when work begins).
30% Design – Standard Elevated Structures	<p>Develop standard 30% structure designs for typical viaduct heights (~20 to 40 feet) and typical spans (~100 to 130 feet). It is expected that there will be up to twelve standard structure designs that can be applied by the RC depending on the height and span requirements of their viaduct structures. An assumed foundation will be included which is to be validated by the RC, based on site specific geotechnical information.</p> <p>This effort by the PMT will address the seismic and track –structure interaction validation assessment for the viaduct structures within the height and span parameters encompassed by the standard viaduct structure 30% designs.</p>	<p>Apply standard viaduct structure 30% designs (provided by the PMT) as appropriate given the layout of the viaduct structures as included in the 15% Design Record Set. Alignment and other adjustment shall be incorporated as required following development of the track alignment 30% design.</p> <p>For standard viaduct structures, review foundation requirements and make any adjustment to the 30% standard design provided by the PMT to reflect site specific geotechnical information. Adjustments to the foundation design are to be reflected in the 30% Design Cost Estimate.</p>
30% Design – Non-Standard and Complex Structures	Review 15% Design – Draft Package with the Regional Consultant to identify complex viaduct and bridge structures that are not addressed by the standard viaduct structure 30% designs, and require additional development work for seismic and track-structure interaction validation.	Perform seismic and track-structure interaction validation to confirm structural feasibility for non-standard and complex structures as identified with the PMT.